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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/758,007

DATE: 02/07/2002

TIME: 13:35:47

Input Set : A:\seqlist.txt

Output Set: N:\CRF3\02072002\I758007.raw

ENTERED

3 <110> APPLICANT: Zon, Leonard I.
 4 Amatruda, James
 5 Shepard, Jennifer
 7 <120> TITLE OF INVENTION: METHOD FOR IDENTIFYING GENES INVOLVED IN CELL PROLIFERATION
 9 <130> FILE REFERENCE: 701039-50920
 11 <140> CURRENT APPLICATION NUMBER: 09/758,007
 12 <141> CURRENT FILING DATE: 2001-01-10
 14 <160> NUMBER OF SEQ ID NOS: 3
 16 <170> SOFTWARE: PatentIn version 3.1
 18 <210> SEQ ID NO: 1
 19 <211> LENGTH: 903
 20 <212> TYPE: PRT
 21 <213> ORGANISM: Danio rerio
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 26 1 5 10 15
 29 Lys Gly Ser Leu Lys Ser Arg Ser Pro Asp Ser Gly Asp Asn Ala Val
 30 20 25 30
 33 Leu Ser Pro Glu Arg His Lys Asp Lys Asp Pro Glu Phe Val Phe Leu
 34 35 40 45
 37 Ser Glu Glu Leu Gln Ser Thr Asn Ser Ile Cys Asp His Ala Trp Arg
 38 50 55 60
 41 Ile Trp Glu Arg Glu Ile Arg Ser Met Asp Lys Thr Asn Met Pro Tyr
 42 65 70 75 80
 45 Ser Asn Arg Gln Gln Trp Gly Ala Cys Leu Phe Ile Ala Gly Met Glu
 46 85 90 95
 49 Leu Glu Gly Ile Asn Leu Thr Phe Thr Gln Phe Leu Lys Ala Val Gly
 50 100 105 110
 53 Leu Ser Val Lys Gln Phe Ile Ser Leu Val Arg Lys Met Asp Val Asn
 54 115 120 125
 57 Val Asp Thr Ile Ser Pro Lys Val Asn Ser Ala Val Thr Arg Leu Glu
 58 130 135 140
 61 Asn Lys Tyr Asp Val Thr Leu Ala Leu Tyr Gln Arg Phe Val Lys Thr
 62 145 150 155 160
 65 Cys Glu Lys Ile Phe Ala Glu Pro Asp Asn Ala Lys Arg Lys Glu Leu
 66 165 170 175
 69 Trp Glu Ser Ser Trp Thr Met Phe Leu Leu Ala Lys Gly Thr Phe Leu
 70 180 185 190
 73 Gln Met Glu Asp Asp Leu Val Ile Ser Phe Gln Leu Leu Leu Cys Val
 74 195 200 205
 77 Leu Glu Phe Phe Ala Lys Arg Leu Ser Pro Ser Leu Leu Gln Ser Pro
 78 210 215 220
 81 Tyr Asn Ser Val Val Ser Ser Ser Thr Leu Ser Pro Pro Thr Arg Thr

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82 225                230                235                240
85 Ser Arg Arg Asn Gln Gly Lys Ser Lys Pro Arg Pro Ala Glu Met Asp
86                245                250                255
89 Met Gln Leu Leu Glu Thr Leu Cys Lys Glu Gly Asp Cys Ser Val Asp
90                260                265                270
93 Glu Val Lys Asn Val Tyr Gln Ser Thr Phe Cys Ala Phe Leu Asp Ser
94                275                280                285
97 Val Gly Leu Leu Gly Leu Gln Gly Leu Pro Pro Met Glu Ala Leu Ser
98                290                295                300
101 Lys Gln Tyr Glu Glu Leu Tyr His Lys Ser Lys Asp Phe Asp Ala Arg
102 305                310                315                320
105 Leu Phe Leu Ser Asp Asp Glu Thr Leu Ser Pro Asn Lys Ile Glu Val
106                325                330                335
109 Ser Lys Val Glu Val Thr Pro Arg Lys Asn Leu Phe Ala Glu Asp Ile
110                340                345                350
113 Ala Ile Pro Val Pro Gln Thr Pro Ile Arg Ala Ala Met Thr Ser Ile
114                355                360                365
117 Gln Gln Leu Arg Gly Asp Leu Thr Ser Gly Ser Asp Gln Pro Ser Ser
118                370                375                380
121 Asn Leu Leu Val Tyr Tyr Lys Asn Cys Thr Val Asp Pro Ser Gly Glu
122 385                390                395                400
125 Ile Lys Lys Arg Val Glu Glu Leu Gly Glu Val Phe Ile Gln Arg Phe
126                405                410                415
129 Ala Gln Ala Val Gly Gln His Cys Glu Gly Leu Gly Arg Lys Arg Phe
130                420                425                430
133 Tyr Leu Gly Ala Gln Leu Tyr Tyr Lys Val Met Glu Ser Met Leu Lys
134                435                440                445
137 Ser Glu Glu Lys Arg Leu Ser Val Gln Asn Phe Ser Lys Leu Leu Asn
138                450                455                460
141 Asn Ala Ala Phe His Thr Ser Leu Leu Ala Cys Ala Leu Glu Val Val
142 465                470                475                480
145 Ile Ala Thr Tyr Val Gly Ser Ser Leu Lys Asn Gly Gly Phe Gly Arg
146                485                490                495
149 Ser Ser Gly Ala Ser Asp Ser Val Glu Ser Asp Leu Cys Phe Pro Trp
150                500                505                510
153 Ile Leu Ser Val Phe Gln Leu Pro Ala Phe Asp Phe Tyr Lys Val Ile
154                515                520                525
157 Glu Ser Phe Ile Lys Ala Glu Pro Thr Leu Lys His Asp Met Val Lys
158                530                535                540
161 His Leu Glu Gln Cys Glu His Val Ile Met Glu Ser Leu Ala Trp Arg
162 545                550                555                560
165 Ala Asp Ser Pro Leu Phe Asp Leu Leu Lys Gln Ser Arg Glu Glu Gly
166                565                570                575
169 Pro Gly Glu Gln Ala Glu Pro Pro Ala Thr Leu Asn Gln Pro Leu His
170                580                585                590
173 His Asn His Thr Ala Ala Asp Leu Tyr Leu Ser Pro Val Arg Pro Cys
174                595                600                605
177 Arg Gln Pro Pro Val Met Glu Ala Glu Pro Pro Thr Pro Gly Thr Arg
178                610                615                620

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181 Ala Pro Arg Ser Asn Ser Leu Ser Leu Phe Tyr Lys Lys Leu Tyr Arg
182 625 630 635 640
185 Met Ala Tyr Leu Arg Leu Lys Met Leu Phe Ser Asn Leu Leu Thr Ser
186 645 650 655
189 His Pro Glu Met Glu Pro Ile Ile Trp Thr Leu Leu Gln His Thr Leu
190 660 665 670
193 Gln Asn Glu Tyr Glu Leu Met Arg Asp Arg His Leu Asp Gln Leu Ile
194 675 680 685
197 Met Ser Ala Met Tyr Ala Ile Cys Lys Val Lys Asn Val Asp Leu Arg
198 690 695 700
201 Phe Lys Thr Ile Val Thr Ala Tyr Lys Glu Leu Pro Asn Thr Asn Gln
202 705 710 715 720
205 Glu Thr Phe Lys Arg Val Leu Ile Arg Glu Gly Gln Tyr Asp Ser Ile
206 725 730 735
209 Ile Val Phe Tyr Asn Leu Val Phe Met Gln Lys Leu Lys Thr Asn Ile
210 740 745 750
213 Leu Gln Tyr Ser Ser Pro Arg Pro Pro Pro Leu Ser Pro Ile Pro His
214 755 760 765
217 Ile Pro Cys Ser Pro Tyr Lys Asn Ser Pro Leu Arg Val Pro Gly Ser
218 770 775 780
221 Asn Asn Val Tyr Val Ser Pro Leu Lys Ser Ser Arg Val Ser Pro Leu
222 785 790 795 800
225 Val Met Thr Pro Arg Ser Arg Ile Leu Ile Ser Ile Gly Glu Ser Phe
226 805 810 815
229 Gly Ser Ala Asp Lys Phe Gln Lys Ile Asn Gln Met Val Ser Ser Ser
230 820 825 830
233 Asp Trp Ser Leu Lys Arg Ser Leu Asp Gly Gly Ser Ala Pro Lys Pro
234 835 840 845
237 Leu Lys Arg Leu Arg Phe Asp Met Asp Gly Gln Asp Glu Ala Asp Gly
238 850 855 860
241 Ser Lys Ser Ser Gly Glu Ser Ala Leu Ile Gln Lys Leu Ala Glu Met
242 865 870 875 880
245 Ser Ser Thr Arg Ser Arg Met Gln Glu Gln Lys Leu Lys Glu Glu Ser
246 885 890 895
249 Asp Lys Asp His Pro Glu Pro
250 900
253 <210> SEQ ID NO: 2
254 <211> LENGTH: 899
255 <212> TYPE: PRT
256 <213> ORGANISM: Xenopus
258 <400> SEQUENCE: 2
260 Met Pro Pro Lys Ser Pro Arg Lys Gln Gln Ile Arg Ser Gln Gly Glu
261 1 5 10 15
264 Pro Arg Ser Pro Asp Arg Pro Asp Phe Gln Asp Pro Asp Phe Asn Phe
265 20 25 30
268 Leu Cys Glu Asn Leu Lys Ile Ser Asp Asn Val Arg Gly Lys Ala Trp
269 35 40 45
272 Asn Thr Tyr Glu Lys Met Phe Pro Ser Gly Tyr Met Met Arg Glu Thr
273 50 55 60

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276 Ala Lys Lys Lys Glu Ser Leu Gly Leu Cys Leu Tyr Ile Ala Ser Val
277 65 70 75 80
280 Asp Cys Glu Glu Met Thr Phe Thr Phe Thr Glu Leu Leu Lys Ile Leu
281 85 90 95
284 Arg Leu Ser Val Asn Arg Cys Phe Arg Leu Leu Arg Glu Met Asp Ile
285 100 105 110
288 Asn Met Asp Val Leu Ser Asn Lys Val Asp Asn Ala Ile Ser Lys Leu
289 115 120 125
292 Lys Lys Lys Tyr Glu Asn Met Cys Leu Leu Phe Gln Lys Phe Gln Arg
293 130 135 140
296 Thr Phe Glu Leu Ile Phe Glu Glu Gln His Asn Thr Arg Ala Ala Val
297 145 150 155 160
300 Asp Thr Ala Pro Ile Leu Lys Gly Thr Trp Ile Thr Phe Leu Leu Ala
301 165 170 175
304 Arg Gly Lys Ile Leu Gln Met Asp Asp Glu Leu Val Ile Ser Ser Gln
305 180 185 190
308 Leu Leu Leu Cys Val Leu Asp Tyr Phe Ile Lys Leu Ser Pro Pro Ser
309 195 200 205
312 Ile Leu Lys Glu Pro Tyr Lys Ser Ala Leu Asn Gly Leu Pro Val Asn
313 210 215 220
316 Thr Pro Pro Arg Ser Ser Arg Arg Ser Gln Asn Arg Asn Thr Arg Val
317 225 230 235 240
320 Ser Pro Gln Ser Glu Thr Asp Ser Lys Val Leu Glu Phe Leu Cys Ser
321 245 250 255
324 Gln Asn Tyr Cys Pro Met Asp Glu Val Arg Asn Val Tyr Ser Thr Ser
325 260 265 270
328 Phe Val Asp Phe Leu Ala Ser Ala Gly Ile Ser Ser Asn Glu Gly Ile
329 275 280 285
332 Pro Lys Val Glu Ser Ile Ser Arg Gln Tyr Glu Glu Leu Tyr His Lys
333 290 295 300
336 His Lys Asp Leu Asp Ala Arg Leu Phe Leu Glu Asn Asp Glu Thr Leu
337 305 310 315 320
340 Lys Val Asp Val Gln Asp Ser Leu Asp Leu Glu Arg Thr Pro Arg Lys
341 325 330 335
344 Asp Glu Ser Glu Val Phe Pro Val Pro Pro Gln Thr Pro Val Arg Gly
345 340 345 350
348 Ala Met Asn Thr Val Gln Gln Leu Met Val Thr Leu Ser Ser Ala Asn
349 355 360 365
352 Asp Lys Pro Pro Asp Thr Leu Asp Ser Tyr Phe Ser Asn Cys Thr Val
353 370 375 380
356 Asn Pro Lys Thr Lys Ile Thr Asp Arg Ile Glu His Phe Gly His Val
357 385 390 395 400
360 Phe Lys Glu Lys Phe Ala Ser Ser Val Gly Gln Ala Cys Ala Glu Ile
361 405 410 415
364 Gly Tyr Gln Arg Tyr Lys Leu Gly Val Cys Leu Tyr Tyr Arg Val Met
365 420 425 430
368 Glu Ala Ile Leu Lys Thr Glu Glu Glu Arg Leu Ser Val His Asn Phe
369 435 440 445
372 Ser Lys Leu Leu Asn Asn Asp Ile Phe His Ile Cys Leu Leu Ala Cys

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373      450      455      460
376 Ala Val Glu Val Val Val Ala Ser Tyr Ala Arg Asn Ala Ser Gln Ala
377 465      470      475      480
380 Tyr Cys Ser Ser Gly Thr Asn Leu Ser Phe Pro Trp Ile Leu Arg Ala
381      485      490      495
384 Phe Glu Ile Lys Ala Phe Asp Phe Tyr Lys Val Ile Glu Cys Phe Ile
385      500      505      510
388 Lys Ala Glu Pro Ser Leu Thr Ser Asn Met Ile Lys Tyr Leu Glu Arg
389      515      520      525
392 Cys Glu His Gln Ile Met Glu Cys Leu Ala Trp Gln Ser Asp Ser Pro
393      530      535      540
396 Leu Phe Asp Leu Ile Lys Gln Thr Arg Glu Arg Glu Gly Leu Val Asp
397 545      550      555      560
400 His Pro Glu Leu Val Ser Asn Leu Gln Gln Pro Val Gln His Asn His
401      565      570      575
404 Thr Ala Ala Asp Leu Tyr Leu Ser Pro Ser Arg Ser Ser His Gln His
405      580      585      590
408 Pro Val Thr Ser Val Pro Thr Ser Ser Val Thr Asn Gly Gln Val Ser
409      595      600      605
412 Ser Ser Gln Pro Val Gln Gln Lys Ser Thr Ser Leu Ser Leu Phe Tyr
413      610      615      620
416 Lys Lys Val Tyr Leu Leu Ala Tyr Lys Arg Leu Ser Ser Leu Cys Ser
417 625      630      635      640
420 Ser Leu Leu Ser Asp His Pro Glu Leu Glu Gln Val Ile Trp Thr Leu
421      645      650      655
424 Leu Gln His Thr Leu Gln Gln Glu Tyr Glu Leu Met Arg Asp Arg His
425      660      665      670
428 Leu Asp Gln Ile Met Met Cys Ser Met Tyr Gly Ile Cys Lys Ala Lys
429      675      680      685
432 Asn Ile Asp Leu Arg Phe Lys Thr Ile Val Thr Ala Tyr Lys Gly Leu
433      690      695      700
436 Thr Asn Thr Asn Gln Glu Thr Phe Lys His Val Leu Ile Arg Asp Gly
437 705      710      715      720
440 Gln His Asp Ser Ile Ile Val Phe Tyr Asn Leu Val Phe Met Gln Lys
441      725      730      735
444 Leu Lys Ser His Ile Leu Gln Tyr Gly Ser Ala Arg His Pro Thr Leu
445      740      745      750
448 Ser Pro Ile Pro His Ile Pro Arg Ser Pro Tyr Arg Phe Gly Asn Ser
449      755      760      765
452 Pro Lys Val Pro Gly Asn Ile Tyr Val Ser Pro Leu Lys Thr Pro Tyr
453      770      775      780
456 Lys Thr Ala Asp Gly Leu Leu Ser Pro Ser Lys Met Thr Pro Lys Thr
457 785      790      795      800
460 Ser Phe Leu Ile Ser Leu Gly Glu Thr Phe Arg Ser Pro Asp Arg Phe
461      805      810      815
464 Gln Lys Ile Asn Gln Met Leu Asn Ser Cys Glu Arg Pro Ile Lys Arg
465      820      825      830
468 Ser Ala Asp Thr Gly Thr Thr Pro Lys Pro Leu Lys Lys Leu Arg Phe
469      835      840      845

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VERIFICATION SUMMARY

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